CLAIMS

What is claimed is:

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1. An apparatus for providing data superimposed on a static signal, the apparatus comprising:

an electronic system for providing data to be superimposed on the static signal;

a modulating circuit connected to said electronic system for receiving said data, said modulating circuit for providing the static signal unaltered when the modulating circuit is not receiving data to be superimposed on the static signal, and for producing deviations in the static signal dependant on said data received from the electronic system.

2. The apparatus of claim 1, wherein said electronic system comprises a data providing circuit for receiving discrete data values representing data to be superimposed on the static signal and for providing said discrete data values serially to said modulating circuit, said modulating circuit producing deviations of the static signal dependent on said discrete data values serially received from said data providing circuit.

3. An apparatus as in claim 1 wherein the electronic system comprises a commercial airline display unit.

4. An apparatus as in claim 3 wherein the commercial airline display unit comprises a liquid crystal display (LCD) unit.

5. An apparatus as in claim 1 wherein the static signal is a 28 Volt Direct Current (VDC) logic signal.

6. An apparatus as in claim 1 wherein the 28 VDC logic signal is the "on indicator" signal on pin 8 of an ARINC 722 connector.

7. An apparatus as in claim 2 wherein said data providing circuit comprises a shift register having parallel inputs for receiving said discrete data values.

8. An apparatus as in claim 1 wherein the modulating circuit produces a deviation that does not change the logical value of the static signal.

9. An apparatus as in claim 8 wherein the modulating circuit produces an approximately 5 volt deviation.

10. A method of collecting data from an electronic system by superimposing data upon a static signal, the method comprising the steps of:

aggregating the data from the electronic system;

modulating the static signal according to the aggregated data to produce a varying data signal superimposed on the static signal;

coupling the varying data signal to a receiving circuit; and

recovering the varying data signal in the receiving circuit to obtain the aggregated data.

11. A method as in claim 10 wherein the step of aggregating the data from the electronic system comprises coupling the data to inputs of a shift register and clocking said shift register to serially shift said data out of the shift register.

12. A method as in claim 11 wherein the step of coupling the data comprises applying a clocking signal to the shift register and providing the output of the shift register to modulate the static signal.

13. A method as in claim 10 wherein the step of aggregating the data from the electronic system comprises aggregating the data from a commercial airline in-flight-entertainment display system.

14. A method as in claim 10 wherein the step of aggregating the data from a commercial airline in-flight-entertainment display system comprises aggregating the data from a commercial airline in-flight-entertainment Liquid Crystal Display (LCD) system.

15. A method as in claim 13 wherein the step of coupling the varying data signal to a receiving circuit comprises coupling the varying data signal into a commercial airline tapping unit.

16. A method as in claim 10 wherein the step of coupling the varying data signal superimposed to a receiving circuit comprises coupling the varying data static signal into a 28 volt "on indicator" on pin 8 of an ARINC 722 connector of a commercial airline in-flight-entertainment display unit.

17. A method as in claim 10 wherein the step of modulating the static signal according to the aggregated data to produce a varying data signal superimposed on the static signal comprises producing deviations on a 28-volt "on indicator" signal on pin 8 of an ARINC 722 connector.

18. A method as in claim 10 wherein the step of modulating the static signal according to the aggregated data to produce a varying data signal superimposed on the static signal comprises coupling the data serially into a 28-volt amplification circuit.

19. An electronic system for collecting data from a first electronic subsystem using a static signal, said static signal indicative of the state of the first electronic subsystem, said data indicative of information other than said state, the electronic system comprising:

a modulation circuit connected to receive data from said first electronic subsystem for superimposing said data on said static system;

a second electronic subsystem for receiving the static signal from the modulation circuit electronic subsystem, and

a circuit for retrieving the superimposed data from the static signal.

20. A system as in claim 19 wherein the electronic system comprises a commercial airline in-flight entertainment system and the first electronic subsystem is a system display unit of the in-flight entertainment system.

21. A system as in claim 20 wherein the in-flight-entertainment system display unit comprises an LCD display unit.

22. A system as in claim 20 wherein the second electronic subsystem is a commercial airline tapping unit.

23. A system as in claim 20 wherein the circuit for retrieving the data superimposed upon the static signal comprises a comparator.

24. A system as in claim 20 wherein the circuit for retrieving the data superimposed upon the static signal comprises a optocoupler.

25. A status monitoring system for a display in an in-flight-entertainment system in an aircraft comprising:

a display unit operative for providing a video display to aircraft passengers and for providing a plurality of status signals;

a status reporting circuit incorporated within or coupled to said display unit for receiving said plurality of status signals;

a system control unit connected to an aircraft bus for communicating commands to said display unit;

a tapping unit coupled to said aircraft bus between said system control unit and the status reporting circuit, said tapping unit coupled to said status reporting circuit through an ARINC 722 connector;

said status reporting circuit transmitting said plurality of status signals to said system control unit via said tapping unit; and

said status reporting circuit connected for transmitting said plurality of status signals to said tapping unit along pin 8 of said ARINC 722 connector; said plurality of status signals superimposed on a static display-on indicator.

26. A status monitoring system for a display in an in-flight-entertainment system in an aircraft comprising:

a plurality of display units, each operative for providing a video display to at least one aircraft passenger and for providing a plurality of status signals corresponding to each display unit;

a status reporting circuit incorporated within or coupled to each of said plurality of display unit for receiving said plurality of status signals;

a system control unit connected to an aircraft bus for communicating commands to said plurality of display units;

a plurality of tapping unit coupled to said aircraft bus between said system control unit and the status reporting circuits, said plurality of tapping unit coupled to said status reporting circuits through a corresponding plurality of ARINC 722 connectors;

said status reporting circuits transmitting said plurality of status signals to said system control unit via said plurality of tapping unit; and

said status reporting circuits connected for transmitting said plurality of status signals to said plurality of tapping unit along pin 8 of said ARINC 722 connectors; said plurality of status signals superimposed on a static display-on indicator.